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ABSTRACT

The effect of gender and grade point average (GPA) on emotional intelligence (EQ) was studied using the Emotional Intelligence Inventory. The inventory was completed by 138 college students, and data were analyzed using a multivariate factorial model with three factors of EQ as dependent variables (compassion, self-awareness, and attunement) and two independent variables, gender and GPA. Multivariate analysis of variance was performed using the Statistical Analysis System. Data show an overall significant multivariate effect of gender on three factors of EQ. Female students had higher scores on the compassion and self-awareness factors than male counterparts. However, there was no significant gender difference on the attunement factor. There was no overall significant multivariate GPA effect on the three factors of EQ. (Contains 2 tables and 19 references.) (SLD)

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EFFECT OF GENDER AND GPA ON EMOTIONAL INTELLIGENCE

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ABSTRACT

Researchers have found that some individuals who have the characteristics that define high emotional intelligence (EQ) are more successful in their personal and professional lives compare to those who only have high IQ. The purpose of this study was to investigate the effect of gender and grade point average (GPA) on the EQ.

The instrument used was the Emotional Intelligence Inventory which was administered to 138 students at the University of Alabama. The data were analyzed using multivariate factorial model with three factors of EQ as dependent variables: (1) Compassion, (2) Self Awareness, and (3) Attunement, and two independent variables: (1) Gender, and (2) GPA. Multivariate analysis of variance (MANOVA) were performed using Statistical Analysis System (SAS) version 608 on the IBM mainframe computer.

The data showed there was an overall significant multivariate effect of Gender on the three factors of EQ. Female students had higher score on the Compassion and the Self Awareness factors compared with male counterparts. However, there was no significant gender differences on the Attunement factor. Moreover, there was no overall significant multivariate GPA effect on the three factors of EQ.

EFFECT OF GENDER AND GPA ON EMOTIONAL INTELLIGENCE

The concept of emotional intelligence (EQ) has received a considerable attention in recent years. Unlike IQ, with about a century history of study, EQ is a relatively new concept. The model of EQ was first proposed by Salovey and Mayer (1990). Goleman (1995) described emotional intelligence as "other characteristics" of intelligence which include abilities: 1) to motivate oneself and persist in the face of frustration, 2) to control impulse and delay gratification, 3) to regulate one moods and keep distress from swamping the ability to think, 4) to empathize and 5) to hope. Salovey and Mayer (1995) defined emotionally intelligent people as those who regulate their emotions according to a logically consistent model of emotional functioning.

Base on the definitions above, EQ and IQ are separate competencies (Ekman 1992; Goleman 1995; Salovey & Mayer 1990; 1995). A person with a high IQ does not necessarily have a high EQ. In some cases academic intelligence has little to do with emotional intelligence or success in life. Ekman (1992) writes that IQ offers little to explain the different destinies of people with generally equal promises, schooling, and opportunity. The example taken was ninety-five Harvard students from the classes of the 1914s who were

followed into their middle age. It was reported that the men with the highest test scores in college were not particularly successful compared with their lower-scoring peers in terms of salary, productivity, or status in their field. It was also reported that they did not have the greatest life satisfaction, nor the most happiness with friendship, family, and romantic relationship.

Some researchers studied gender differences in intensity of emotional experience (Grossman & Wood 1993), empathy (Trobs, Collins & Embree 1994), body image and self esteem (Furnham & Greaves 1994), aggressive feeling and social monitoring (Cole, Zahn-Waxler & Smith 1994; Davis 1995; McConatha & Lightner 1994), coping with problems (Porter & Stone 1995; Ptacek, Smith & Dodge 1994); human relations (Gwartney-Gibbs & Lach 1994; Porter & Stone 1995), emotional and potential development (Miller, Silverman & Falk 1994), parenting and family support (Adams, Kuebli, Boyle & Fivush 1995; Porter & Stone 1995; Tubman & Windle 1995), and depression (Gratch, Bassett & Attra 1995).

In intensity of emotional experience, it was reported that females experienced personal emotions of greater intensity than males. However, no gender differences were found in emotion self report (Grossman & Wood 1993).

It was reported that stated empathic responses were associated with support provision. Emotion played an important role in support provision. Women were more

supportive than men and the gender effect was largely mediated by empathy (Trobs, Collins & Embree 1994).

Furnham and Greaves (1994) reported that self esteem is linked to body attitudes more for women than for men. Women had lower body image satisfaction than men, and for women the purpose of exercising is mainly for weight control and attractiveness.

Men were reported more inhibition of aggressive feelings and tended to ruminate more about emotionally upsetting events (McConatha & Lightner 1994). Moreover, Davis (1995) demonstrated that boys display greater negative affect than girls when they receive a disappointing gift. When they are motivated to mask disappointment with a positive expression, boys reduced their negative expression. However, they still showed higher levels of negativity than the girls. It was also reported that girls showed higher levels of social monitoring behaviors than boys.

Women were reported seeking social support, using emotion-focused coping with their mood to a greater extent than men, whereas men used more problem-focused coping than women (Butler & Nolen-Hoeksema 1994; Ptacek, Smith & Dodge 1994). However, Porter and Stone (1995) reported that women did more problem-focus coping on the self, parenting, and problems with other people; men reported more work-related and miscellaneous problems. In the workplace, women displayed more sensitivity to problems associated with

interpersonal relations than men did; men had a relatively lack of concern for personality conflicts. Results are inconsistent with a purely situational explanation of gender differences in coping but are consistent with the notion that men and women are socialize to cope with stress in different ways.

Miller, Silverman and Falk (1994) displayed gender differences in emotional development. It was reported that women scored higher on emotional potential and level of emotional development while men were higher on intellectual potential.

An instrument to measure emotional intelligence has been proposed by Baggett, Sutarso & Tapia (1996). The instrument was reported to be reliable and valid with the reliability coefficient Cronbach Alpha = .87. It was also demonstrated using factor analysis technique that the emotional intelligence's instrument revealed the following three factors: (1) compassion/empathy, (2) self-awareness /self-control, and (3) attunement.

The purpose of this study was to investigate: (1) multivariate interaction effect of variables GENDER*GPA on the three factors of emotional intelligence, (2) effect of grade point average (GPA) on the three factors of emotional intelligence, and (3) effect of GENDER on the three factors of emotional intelligence.

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Method

The participants of this study were 138 students from four classes of BER 450 (Test and Measurements) and four classes of BEP 205 (Educational Psychology) in the College of Education, University of Alabama. The majority of the students were undergraduate. The instrument used was the Emotional Intelligence Test (Baggett, Sutarso & Tapia 1996).

Items which asked about variable GENDER and grade point average (GPA) were added in the part of background information of the instrument. Variable GPA consisted of five categories: (1) 3.50 - 4.00, (2) 3.00 - 3.49, (3) 2.50 - 2.99, (4) 2.00-2.49, and (5) Less than 2.00. Since there were no students with GPA less than 2.00 and there was a good distribution of students having high GPA = 3.00 - 4.00 and who had low GPA = 2.00 - 2.99, the category of GPA was divided into the two categories.

Based on the purpose of the study, a multivariate factorial linear model was used as a research design. The linear model was written as,

CE SAC A = GENDER + GPA + GENDER*GPA

where

CE = Compassion/Empathy

SAC = Self Awareness/Self Control

A = Attunement

The dependent variables CE, SAC, and A were the three factors of emotional intelligence scores.

Based on the model, this study will test the following hypotheses. If the first null hypothesis is rejected, a follow up will be conducted, and the other null hypotheses following it will be ignored.

HO_1: There will be no significant interaction effect of the two variables GENDER*GPA for the three variables CE, SAC, and A at the .05 level.

HO_2: There will be no significant GPA differences for the three variables CE, SAC, and A at the .05 level.

HO_3: There will be no significant GENDER differences for the three variables CE, SAC, and A at the .05 level.

Results

First, data analysis indicated that the two-way interaction effect of the two variables GENDER*GPA to the three dependent variables CE, SAC, and A was insignificant (Wilks' Lambda with $F(3,118) = .7220$, p-value $< .5408$). Hence, it was concluded that there was not enough evidence to indicate a two-way multivariate interaction. Therefore, Null Hypothesis 1 was not rejected, and Null Hypotheses 2 and 3 would be tested.

Second, the data revealed that the effect of variable GPA to the three dependent variables CE, SAC, and A was also insignificant (Wilks' Lambda with F(3,118) = 1.2984, p-value < .2783). So, it was concluded that there was not enough evidence to say that there was an effect of variable GPA to the three dependent variables CE, SAC, and A. Therefore, Null Hypothesis 2 was not rejected.

Third, the data displayed that the effect of variable GENDER to the three dependent variables CE, SAC, and A was significant (Wilks' Lambda with F(3,118) = 4.1736, p-value < .0076). So, it was concluded that there was enough evidence to say that there was an effect of variable GENDER to the three dependent variables CE, SAC, and A. Therefore, Null Hypothesis 2 was rejected, and a follow up would be conducted.

Table 1 showed that effect of variable GENDER to the dependent variable CE was significant (F(1,120) = 7.35, p-value < .0077). So, it was concluded that there was enough evidence to say that there was an effect of variable GENDER to the variable Compassion/Empathy. Table 2 described that females had higher means score of Compassion/Empathy, 41.28, compared with their males counterpart, 37.44. Table 1 also displayed that effect of variable GENDER to the dependent variable SAC was significant (F(1,120) = 11.15, p-value < .0011). So, it was concluded that there was enough evidence to say that there was an effect of variable GENDER to the

variable Self-Awareness/Self-Control. And, Table 2 demonstrated that females had higher means score of Self-Awareness/Self-Control, 32.31, compared with their males counterpart, 28.37. However, Table 1 revealed that effect of variable GENDER to the dependent variable A was insignificant ($F(1,120) = 2.75$, p-value $< .1000$). So, it was concluded that there was not enough evidence to say that there was an effect of variable GENDER to the variable Attunement.

Table 1. MANOVA Summary CE SAC A = GENDER + GPA + GENDER*GPA

SOURCE	DF	SUM OF SQUARE	F	p
Dependent Variable: Compassion/Empathy				
GENDER	1	228.1712	7.35	.0077
GPA	1	110.5272	3.56	.0616
GENDER*GPA	1	13.7681	.44	.5067
Error	120	3725.3462		
Corrected Total	123	4167.1857		
Dependent Variable: Self-Awareness/Self-Control				
GENDER	1	240.5652	11.15	.0011
GPA	1	23.5208	1.09	.2985
GENDER*GPA	1	9.4075	.44	.5103
Error	120	2588.3299		
Corrected Total	123	2891.7414		
Dependent Variable: Attunement				
GENDER	1	49.8391	2.75	.1000
GPA	1	2.7143	.15	.6955
GENDER*GPA	1	8.6709	.48	
Error	120	2175.9356		
Corrected Total	123	2269.8719		

Table 2. Means Comparisons between GENDER

FACTORS OF EMOTIONAL INTELLIGENCE	GENDER Male	Female
Compassion/Empathy	37.44	41.28
Self-Awareness/Self-Control	28.37	32.31
Attunement	28.29	30.08

Discussion and Conclusion

Multivariate data analysis indicated that the two-way interaction effect of the two variables GENDER*GPA to the three dependent variables CE, SAC, and A as reflections of three factors of emotional intelligence: compassion/empathy, self-awareness/self-control, and attunement was insignificant. Moreover, the data concluded that there was not enough evidence to say that there was an effect of variable GPA to the three factors of emotional intelligence. These findings were consistent with the statement that EQ and IQ are separate competencies (Ekman 1992; Goleman 1995; Salovey & Mayer 1990; 1995).

The data analysis concluded that there was enough evidence to say that there was an effect of variable GENDER to the three factors of emotional intelligence. This was consistent with other studies in which there were gender differences in various aspects of

emotional intelligence (Adams, Kuebli, Boyle & Fivush 1995; Cole, Zahn-Waxler & Smith 1994; Davis 1995; McConatha & Lightner 1994; Furnham & Greaves 1994; Gratch, Bassett & Attra 1995; Grossman & Wood 1993; Gwartney-Gibbs & Lach 1994; Miller, Silverman & Falk 1994; Porter & Stone 1995; Ptacek, Smith & Dodge 1994; Trobs, Collins & Embree 1994; Tubman & Windle 1995).

It was concluded that there was enough evidence to say that females had higher means score of Compassion/Empathy compared with their males counterpart. This was consistent with the finding that women are more supportive than men, and the gender effect was largely mediated by empathy (Trobs, Collins & Embree 1994). However, on the factor of self-awareness/self-control, there were inconsistent findings among researchers. This study concluded that females had higher means score of Self-Awareness/Self-Control compared with their males counterpart which was consistent with the research findings of McConatha and Lightner (1994); Davis (1995). However, it was inconsistent with some of the results of study by Grossman and Wood (1993). This study also concluded that there was not enough evidence to say that there was an effect of variable GENDER to the variable Attunement. In summary, more research needed to be done in this area to measure emotional intelligence and its relation to other aspects of human life development.

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